EXTENDED TREATMENT PACKAGE SYSTEMS

Description. Manufactured and "packaged" mechanical treatment devices that provide additional biological treatment to sewage producing an effluent of significantly better quality than that of septic tank effluent. Such units may use extended aeration, contact stabilization, rotating biological contact, trickling filters or other methods to achieve treatment.

Conditions for Approval.

1) A maintenance entity should be available to provide continued operation and maintenance of the device. approval of the entity should be made by the Director prior to issuance of a permit. Approvable entities may include:

    a) Municipal wastewater treatment departments
    b) Water or Sewer Districts
    c) Corporations

2) Extended treatment package systems may be used for single family dwellings without an approved maintenance entity **only under all of the following conditions**:

    a) The volume of the extended treatment package system reaction vessel must meet or exceed the minimum volume required for a septic tank.
    b) The site is acceptable for a standard drainfield. All separation distances from ground water and surface waters, limiting layers and soil types shall be met.
    c) Enough land is available and suitable for two full size drainfields. One complete full sized drainfield shall be installed.
    d) A State approved effluent filter shall be used at the outlet of the package treatment system and before the drainfield.

3) Final effluent disposal must meet the following criteria:

    a) Surface discharge. System owner should apply for a National Pollution Discharge Elimination System Permit (NPDES) from the U.S. Environmental Protection Agency.
    b) Groundwater discharge. Effluent quality must meet the applicable requirement of the Water Quality Standards and Wastewater Treatment Requirements, and all other applicable regulations.
    c) Subsurface discharge. If an 85% reduction or better in biological oxygen demand (BOD_5) and total suspended solids (TSS) can be achieved, then the effluent may be discharged to a drainfield meeting the criteria in the sand filter-Intermittent gravity Disposal Trenches Section. Otherwise, the effluent must be discharged to a standard drainfield.

    d) Monitoring.

        i) Annual monitoring of effluent is required for all extended treatment package systems that discharge to a reduced size drainfield or to a drainfield with a reduced separation distance to ground water.

ii) The monitoring will be for BOD_5 and TSS. Results for BOD_5 and TSS that exceed 30 mg/L indicate the pretreatment device is not achieving the required 85% reductions.

iii) For those systems installed in nitrogen sensitive areas or are used to fulfill nutrient-pathogen study results/requirements, the following additional constituents will be monitored in addition to BOD and TSS: Total Kjeldahl Nitrogen (TKN), and Nitrate-Nitrite nitrogen (NO_3+NO_2-N). Results for Total Nitrogen (TKN + NO3+NO2-N), that exceed the levels stipulated in the subdivision approval for sanitary restrictions release or the nutrient-pathogen study approval indicate that the device is failing to achieve the required reductions. Lab results that exceed the numerical Total Nitrogen values specified in the Total Nitrogen Reduction Policy, Table 1, Column 3, indicate that the treatment device is not achieving the required percent nitrogen reduction, specified in Table 1, Column 2. See Table 1, Best Practical Methods for Onsite Wastewater Systems, on page 85-1.

iv) Samples are required to be analyzed by a certified laboratory and the monitoring results will be submitted as part of the Annual Report submitted to the local District Health Department.

v) Additional Operations and Maintenance (O&M) is required for devices that fail to achieve the above reductions and additional sampling is required to demonstrate the additional O&M was successful in restoring the treatment device to the above requirements.

4) Manufactured and "packaged" mechanical treatment devices shall be NSF approved or specified by a professional engineer licensed in Idaho and specializing in environmental or sanitary engineering.

5) If the system is experimental, the system owner must provide a waiver of liability absolving the Department of any liability arising from operation or malfunction of the system.

Design.

1) All materials shall be durable, corrosion resistant and designed for their intended use.
2) All electrical components should be approved by the Department of Labor and Industrial Services.
3) Design for each specific application should be provided by a Professional Engineer licensed in the State of Idaho and specializing in environmental or sanitary engineering.

Construction.

1) Installation shall be by a licensed Public Works Contractor, licensed Plumber, licensed Electrician or licensed Complex System Installer, as determined by the Director for the specific device being installed. If the device requires any on-site fabrication or component assembly a Public Works Contractor should be used.
2) The design or certifying engineer should provide a written statement, within 90 days of completion of installation, that the system has been installed and is operating in acco5rdance with design and/or the manufacturer's recommendations.